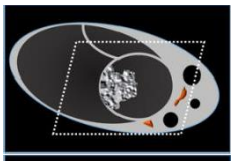
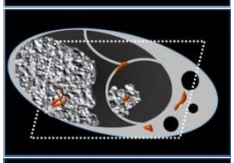
ANNEXURE - A

O-RADS Key Ultrasound Lexicon Terms for Risk Assessment

Category	Term	Definition	Comments
1	**Major Categories**		
	Physiologic Category (consistent with normal ovarian physiology)		
	Follicle	Simple cyst ≤ 3 cm in premenopausal group	
	Corpus luteum (CL)	Thick walled cyst ≤ 3 cm that may have crenulated inner margins, internal echoes and intense peripheralcolor Doppler flow	CL can sometimes appear as a hypoechoic region in the ovary with peripheral vascularity without a characteristic cystic component
	Lesion Category (**not** consistent with normal physiology)		
	Unilocular, no solid component	Cystic lesion that contains a single compartment. May contain ≥ 1 incomplete septum, wall irregularity < 3mm height or internal echoes	***Simple cyst is a subset of unilocular cyst with a smooth, thin wall, acoustic enhancement and no internal elements, thus anechoic**
	Unilocular cyst with solid component(s)	As above but includes solid component(s) ≥ 3mm inheight	
	Multilocular cyst, no solid elements	Cystic lesion with more than one compartment (at least one complete septum) but no solid component(s) ≥ 3mm in height	
	Multilocular cystwith solid component(s)	As above but includes ≥ 1 solid component(s) ≥ 3 mmin height	
	Solid or solid appearing (greater than or equal to 80%)	Lesion with echogenicity suggestive of tissue without characteristics of a cyst. Lesion is at least 80% solid when assessed in orthogonal 2-dimensional plane	Confirmed with color or spectral Doppler with absence of color Doppler flow less informative. Lack of internal motion with transducer pressure is helpful.
2	**Size**		
	Maximum diameter	Maximum diameter of a lesion in any plane	
3	**Solid or Solid-Appearing Lesions**		
	External contour		
	Smooth	Regular outer margin	
	Irregular (Not Smooth)	Non-uniform outer margin	A lobulated outer margin is consideredirregular
	Internal contents		
	Acoustic shadowing	Artifact produced by attenuated echoes behind asound absorbing structure	Descriptor is commonly associated with calcification(s) or fibromatous type lesion
4	**Cystic Lesions**		
	Inner Margin or Walls Including Solid Component		
	Papillary projection or nodule	Solid component whose height ≥ 3 mm, arises from the cyst wall or septation and protrudes into the cyst cavity	Number of papillary projections shouldbe included
	Smooth	Regular, uniform inner margin that may include innermargin of a solid component that is not a papillary projection	
	Irregular (not smooth)	Irregular, non-uniform inner margin. May include wall irregularities due to incomplete septations, solid components < 3mm height, papillary projections, the contour of the solid component or the margin of any internal cystic area within the solid component	

	Internal Content, Cystic Component		
	Anechoic fluid	No internal echoes or structures of any kind	
	Hyperechoic components	Area of increased echogenicity with respect to normal ovarian parenchyma without acoustic shadowing	Descriptor associated with dermoid cysts or hemorrhagic lesions
"Classic" Benign Descriptors- See Table 4 definitions • **Hemorrhagic cyst** • **Dermoid cyst** • **Endometrioma**			
5	**Vascularity**		
	Color score 1-4	Overall subjective assessment of color Doppler flow within the entire lesion (wall and/or internal component) Color Score = 1No flow  Color Score = 2 Minimal Flow  Color Score = 3 Moderate flow Color Score = 4 Very Strong Flow	IOTA Group criteria using vendor recommended settings Spectral Doppler may be needed to distinguish vascular flow from artifact
6	**General and Extra-Ovarian Findings**		
"Classic" Benign Descriptors- See Table 4 definitions • **Paraovarian cyst** • **Peritoneal inclusion cyst** • **Fallopian tube (fluid distended)**			
Fluid Descriptors	Cul-de-sac fluid	Confined to pouch of Douglas as defined by remaining below uterine fundus or between uterus and bladder when uterus retroverted/retroflexed	
	Ascites	Fluid extending above uterine fundus beyond the pouch of Douglas or cul-de-sac when anteverted/anteflexed, and anterior/superior to uterus when retroverted/retroflexed	
Other	Peritoneal thickening or nodules	Nodularity or diffuse thickening of the peritoneal lining(s) or along the bowel serosal surface or peritoneum associated with peritoneal carcinomatosis	

O-RADS Ultrasound Risk Stratification and Management System

O-RADS Score	Risk Category [IOTA Model]	Lexicon Descriptors		Management	
				Pre-menopausal	Post-menopausal
0	Incomplete Evaluation [N/A]	N/A		Repeat study or alternate study	
1	Normal Ovary [N/A]	Follicle defined as a simple cyst ≤ 3 cm		None	N/A
		Corpus Luteum ≤ 3cm			
2	Almost Certainly Benign [< 1%]	Simple cyst	≤ 3 cm	N/A	None
			> 3 cm to 5 cm	None	Follow up in 1 year. *
			> 5 cm but < 10 cm	Follow up in 8 - 12 weeks	
		Classic Benign Lesions	See table on next page for descriptors and management strategies		
		Non-simple unilocular cyst, smooth inner margin	≤ 3 cm	None	Follow up in 1 year * If concerning, US specialist or MRI
			> 3 cm but < 10 cm	Follow-up in 8 - 12 weeks If concerning, US specialist	US specialist or MRI
3	Low Risk Malignancy [1-<10%]	Unilocular cyst (simple or non-simple) ≥ 10 cm		US specialist or MRI Management by gynecologist	
		Typical dermoid cysts, endometriomas, hemorrhagic cysts ≥ 10 cm			
		Unilocular cyst, with irregular inner wall (<3 mm height), any size			
		Multilocular cyst with smooth inner walls/septations, < 10 cm, CS = 1-3			
		Solid lesion with smooth outer contour, any size, CS = 1			
4	Intermediate Risk [10- < 50%]	Multilocular cyst, no solid component	Smooth inner wall, ≥ 10 cm, CS = 1-3	US specialist or MRI Management by gynecologist with gyn-oncologist consultation or solely by gyn-oncologist	
			Smooth inner wall, any size, CS = 4		
			Irregular inner wall ± irregular septation, any size, CS = any		
		Unilocular cyst with solid component	1-3 papillary projections (pp), or solid component that is not a pp, any size, CS= any		
		Multilocular cyst with solid component	Any size, CS = 1-2		
		Solid lesion	Smooth outer contour, any size, CS = 2-3		
5	High Risk [≥ 50%]	Unilocular cyst, ≥ 4 papillary projections, any size, CS = any		Gyn-oncologist	
		Multilocular cyst with solid component, any size, CS = 3-4			
		Solid lesion with smooth outer contour, any size, CS = 4			
		Solid lesion with irregular outer contour, any size, CS = any			
		Ascites and/or peritoneal nodules**			

CS=color score; GYN = gynecologic; IOTA = International Ovarian Tumor Analysis; N/A = not applicable

* At a minimum, at least one-year follow-up showing stability or decrease in size is recommended with consideration of annual follow-up of up to 5 years, if stable. However, there is currently a paucity of evidence for defining the optimal duration or interval of timing for surveillance.

**Presence of ascites with category 1-2 lesion, must consider other malignant or non-malignant etiologies of ascites

O-RADS Ultrasound Risk Stratification and Management SystemClassic Benign Lesions (O-RADS 2)

Lexicon Descriptor	Definition	Management	
		Premenopausal	**Postmenopausal**
Typical hemorrhagic cyst	Reticular pattern: Fine thin intersecting lines representing fibrin strands Retracting clot: An avascular echogenic component with angular, straight, or concave margins	≤ 5 cmNone	US specialist, gynecologist orMRI
		>5 cm but < 10 cm Follow up in 8-12 weeks If persists or enlarges, referral to US specialist, gynecologist, or MRI	US specialist, gynecologist orMRI
Typical dermoid cyst < 10 cm	Hyperechoic component with acoustic shadowing Hyperechoic lines and dots Floating echogenic spherical structures	Optional initial follow up in 8-12 weeks based upon confidence in diagnosis If not removed surgically, annual US follow up should then be considered * US specialist or MRI if there is enlargement, changing morphology or a developing vascular component	US specialist, gynecologist, orMRI With confident diagnosis, if not removed surgically, annual US follow up should then be considered * MRI if there is enlargement, changing morphology or a developing vascular component
Typical endometriomas < 10 cm	Ground glass/homogeneous low-levelechoes		
Simple paraovarian cyst/any size	Simple cyst separate from the ovary that typically moves independent of the ovary when pressure is applied by the transducer	None If not simple, manage per ovariancriteria	Optional single follow up study in1 year
Typical peritoneal inclusion cyst/anysize	Follows the contour of the adjacent pelvic organs or peritoneum, does not exert mass effect and typically contains septations. The ovary is either at the margin or suspended within the lesion.	Gynecologist	Gynecologist
Typical hydrosalpinx/ anysize	Incomplete septation Tubular Endosalpingeal folds: Short round projections around the inner wall of a fluid distended tubular structure	Gynecologist	Gynecologist

*There is currently a paucity of evidence for defining the optimal duration or interval of timing for surveillance. Evidence does support an increasing risk of malignancy in endometriomas following menopause.